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ABSTRACT

This module on the double-needle felling machine, one in a series dealing with industrial sewing machines, their attachments, and operation, covers two topics: performing special operations on the double-needle felling machine (straight seams) and performing special operations on the double-needle felling machine (curved flat-felled seams). For each topic these components are provided: an introduction, directions, an objective, learning activities, student information, a student self-check, and a check-out activity. An instructor's final checklist for evaluating the students' performance is attached. (YLB)

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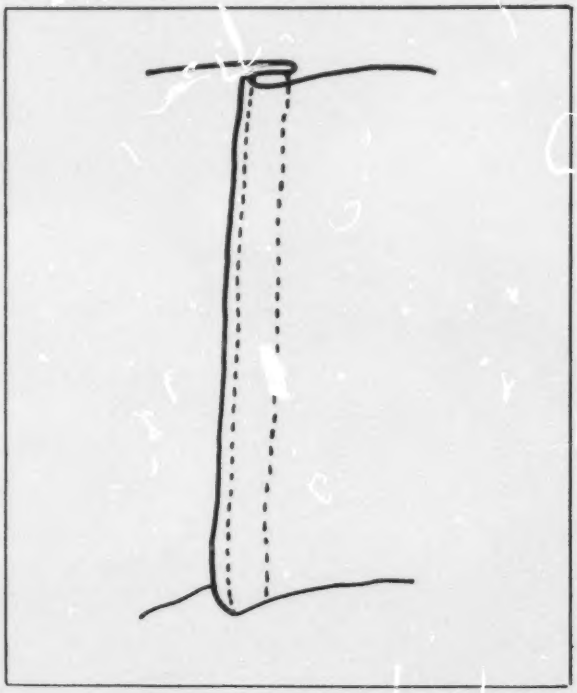
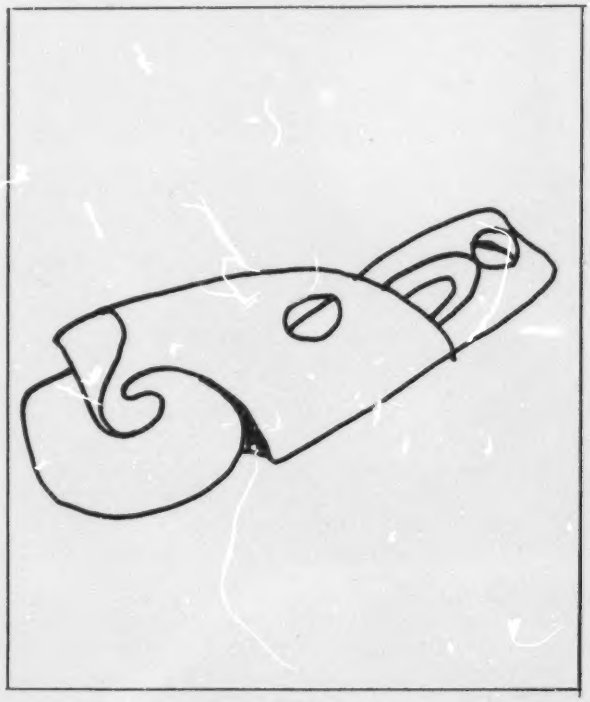
straight flat-felled seam





PERFORMING SPECIAL OPERATIONS ON THE DOUBLE NEEDLE FELLING MACHINE
(Straight Seams)

INTRODUCTION

The multi-needle felling machine produces a flat felled seam for garments which need a sturdier seam than is normally used. The flat felled seam is constructed by tucking the fabric under and topstitching simultaneously. This machine may be a lockstitch or chainstitch operation.

In this module you will learn to operate the double needle felling machine by constructing straight, flat felled seams.

DIRECTIONS

Read the Objective. If you think you can accomplish this Objective now, turn to the Check-Out Activity and follow the instructions.

If you feel you are not able to accomplish this Objective now, look at the Learning Activities. Begin the Learning Activities and as soon as you feel you are ready, turn to the Check-Out Activity and follow the instructions.

OBJECTIVE

Given a double needle lockstitch felling machine, thread, snips, and fabric, construct a flat felled seam. The seam must be straight and free of puckers.

LEARNING ACTIVITIES

1. READ Student Information, THE FELLING MACHINE (STRAIGHT SEAMS).

2. VIEW a teacher demonstration on using the double needle felling machine to construct straight seams.

3. COMPLETE Student Self-Check, THE FELLING MACHINE (STRAIGHT SEAMS).

4. TURN to the Check-Out Activity and follow the instructions.

STUDENT INFORMATION

The Felling Machine (Straight Seams)

The double needle felling machine has at least two needles and can produce the lock stitch. These characteristics qualify it as a multi-needle lockstitch felling machine.

If the felling machine has two needles, the fabric is folded so that the flat felled seam is constructed showing two rows of topstitching. A flat felled seam is produced by tucking under the two edges of the fabric and topstitching (Figure 1).

Figure 1

Tucking the fabric under may be done manually or with an attachment called a folder. The purpose of this attachment is to fold the work into the machine (Figure 2).

Figure 2

Very little feed pressure is required to produce a straight seam. Excessive pulling of the fabric will cause it to slide out of the folder (Figure 3).

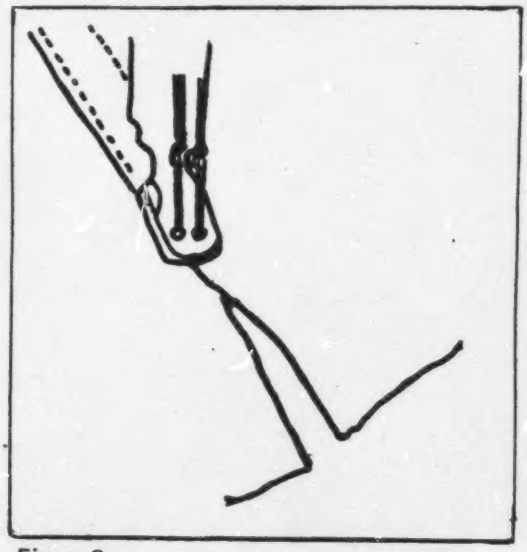


Figure 3

The double needle lockstitch felling machine has two needles, two tension assemblies, and two bobbins. The machine uses three spools of thread. Two are threaded through the top of the machine and one is used for the bobbin winder.

Follow these steps in constructing a flat felled seam.

1. Use both hands to roll the material into the folder. Each side of material must be turned under to form the flat fell.

2. Feed the material through the folder for a finished product.

3. After the seam is completed, JERK the garment away from the machine. This action will lock the stitch in so that it will not ravel.

Make sure the material is out from under the needles before jerking the garment away from the machine. This procedure is only acceptable on the lockstitch machine.

The finished product with a correct flat felled seam is shown in Figure 4.

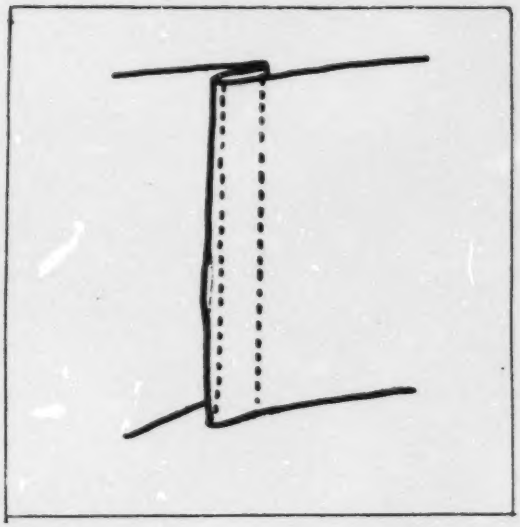


Figure 4

Double Needle Chainstitch

Some manufacturing companies use the double needle chainstitch machine to make flat felled seams. A brief description is presented to explain the difference between the double needle *chainstitch* machine and the double needle *lockstitch* machine.

With the double needle chainstitch machine, the operator may sit sideways to the machine in order to properly feed the fabric. The machine is usually stationed slightly off the table. The following illustration of a double needle chainstitch machine shows that the loopers, instead of bobbins, use two spools of thread.

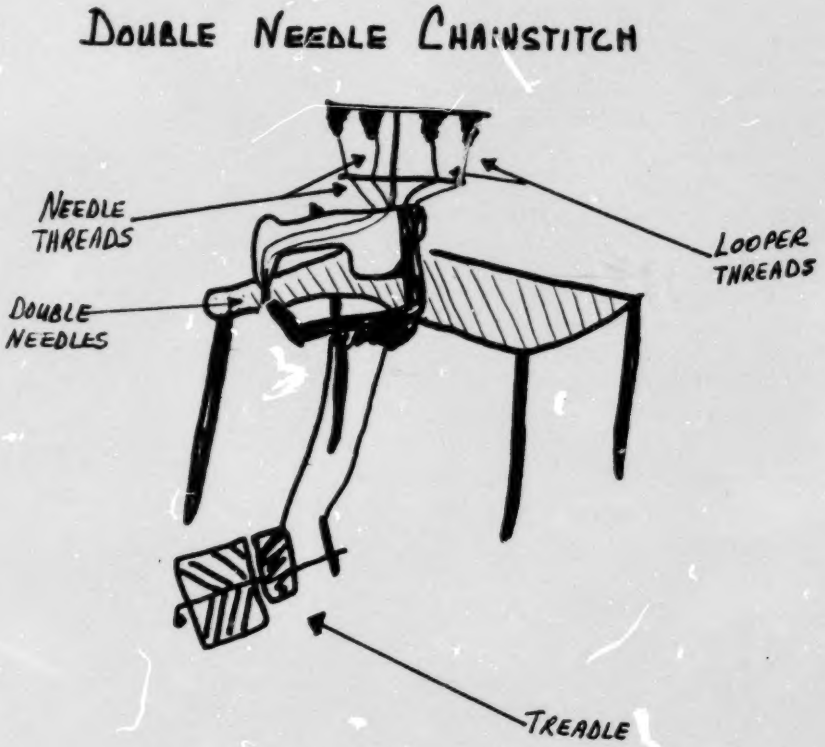


Figure 5

STUDENT SELF-CHECK

Write the answers to the following statements on a separate sheet of paper.

1. The double needle lockstitch felling machine has two needles, two tension assemblies, and two bobbins. This particular machine uses only two spools of thread. (True or false)

2. The fabric is folded to construct a flat felled seam with two rows of topstitching. (True or false)

3. Pulling the fabric will cause the fabric to slide out of the folder. (True or false)

4. One spool of thread is used for the bobbin winder on the double needle lockstitch machine. (True or false)

CHECK-OUT ACTIVITIES

The statement below explains the activity you must complete in order to finish this module. After you go through the activity, your instructor will rate your performance using the Instructor's Final Checklist.

Your instructor will provide you with a double needle lockstitch felling machine, thread, snips, and fabric. Construct a straight flat felled seam. The seam must be free of puckers and the fabric must not be stretched.

Student _____

Date _____

Instructor's Final Checklist

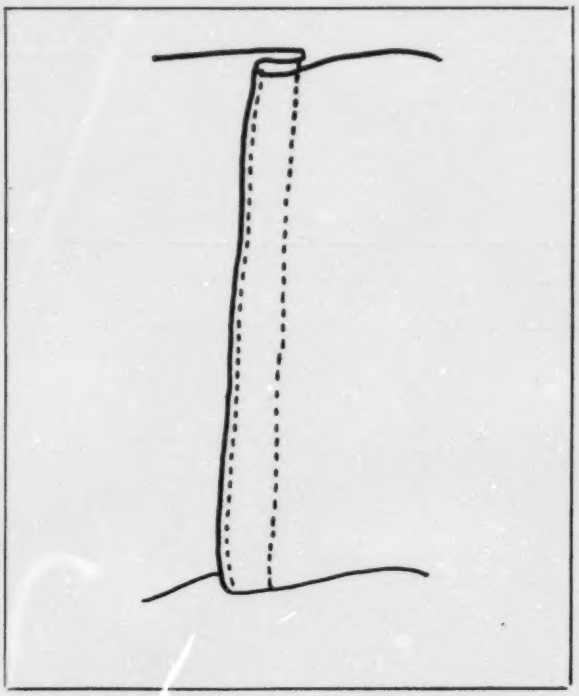
Check the student's performance in the following elements of performing special operations on the double needle felling machine (straight seams).

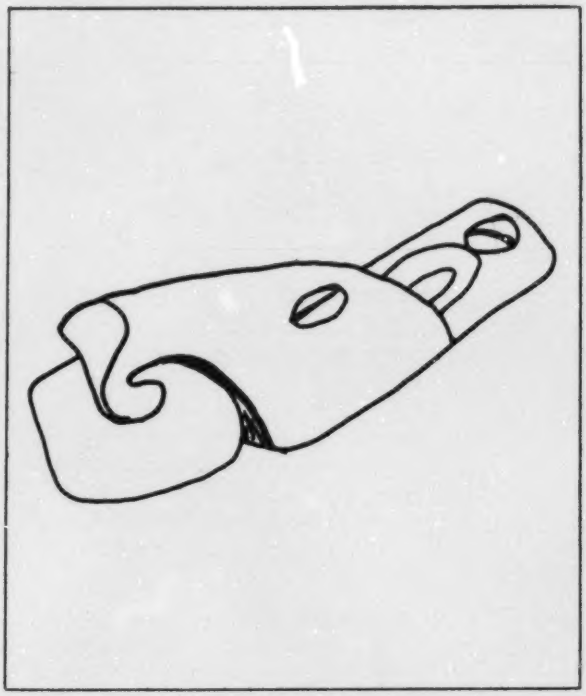
Place an X in the appropriate box indicating not accomplished, partially accomplished, or fully accomplished. If, because of special circumstances, the item was impossible to complete, place an X in the "Not Applicable" box.

Performance Level: All items must receive a rating of FULLY ACCOMPLISHED (or Not Applicable). If any items are rated Not Accomplished or Partially Accomplished, the student and instructor will discuss this and decide which learning activities must be repeated.

	Student Performance			
	Not Applicable	Not Accomplished	Partially Accomplished	Fully Accomplished
The student constructed:				
a. A flat felled seam.	( )	( )	( )	( )
b. A seam which was straight.	( )	( )	( )	( )
c. A seam which was free of puckers.	( )	( )	( )	( )
d. A seam without stretching the fabric.	( )	( )	( )	( )

curved flat-felled seam





PERFORMING SPECIAL OPERATIONS ON THE DOUBLE NEEDLE FELLING MACHINE
(Curved Seams)

INTRODUCTION

The multi-needle felling machine produces a flat felled seam for garments which need a sturdier seam than is normally used. The flat felled seam is constructed by tucking the fabric under and topstitching simultaneously. This machine may be a lockstitch or chainstitched operation.

In this module, you will learn to operate the double needle felling machine by constructing curved, flat felled seams.

DIRECTIONS

The module on constructing a straight flat felled seam should be completed before beginning work on this module.

Read the Objective. If you think you can accomplish this Objective now, turn to the Check-Out Activity and follow the instructions.

If you feel you are not able to accomplish this Objective now, look at the Learning Activities. Begin the Learning Activities and as soon as you feel you are ready, turn to the Check-Out Activity and follow the instructions.

OBJECTIVE

Given a double needle lockstitch felling machine, thread, snips, and fabric, construct a flat felled seam. The seam must be curved and free of puckers.

LEARNING ACTIVITIES

1. READ Student Information, THE DOUBLE NEEDLE FELLING MACHINE (CURVED SEAM).

2. VIEW a teacher demonstration on using the double needle felling machine to construct curved seams.

3. COMPLETE Student Self-Check, THE DOUBLE NEEDLE FELLING MACHINE (CURVED SEAM).

4. TURN to the Check-Out Activity and follow the instructions.

STUDENT INFORMATION

The Double Needle Felling Machine (Curved Seam)

The double needle felling machine produces a curved flat felled seam by a process very similar to making the straight flat felled seam. Feed the fabric through the folder the same way, but be careful not to pull or push the fabric.

The difference in the two seams is that the fabric is cut on a curved line. Both edges of the fabric may be cut on a curve as in a sleeve (Figure 6).

Figure 6

Another method would be to cut one edge of the fabric straight and the other edge curved as on a jacket sleeve with two pieces. The curved side eliminates the need for an elbow dart.

The straight side is on the top of the sleeve (Figure 7).

Figure 7

The finished product with a correct flat felled seam is shown in the following illustration (Figure 8).

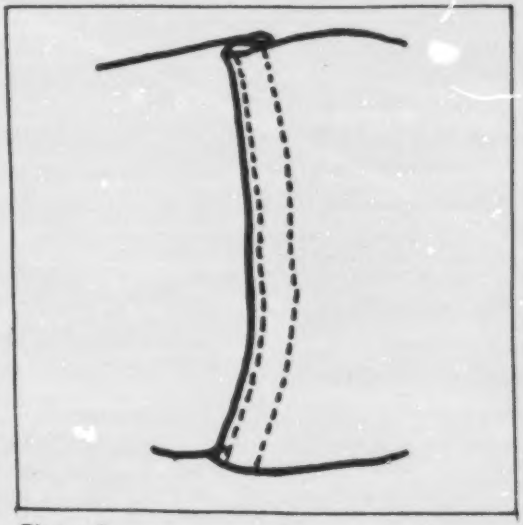


Figure 8

STUDENT SELF-CHECK

The Double Needle Felling Machine (Curved Seam)

Write the answers to the following statements on a separate sheet of paper.

1. A curved flat felled seam is constructed the same way as the straight flat felled seam. (True or false)

2. One edge of the fabric may be cut straight and the other edge may be cut curved and still make a flat felled seam. (True or false)

3. The fabric must be pulled through the folder. (True or false)

CHECK-OUT ACTIVITY

The statement below explains the activity you must complete in order to finish this module. After you go through the activity, your instructor will rate your performance using the Instructor's Final Checklist, PERFORMING SPECIAL OPERATIONS ON THE DOUBLE NEEDLE FELLING MACHINE (Curved Seams).

Your instructor will provide you with a double needle lockstitch felling machine, thread, snips, and fabric. Construct a curved, flat felled seam. The seam must be free of puckers and the fabric must not be stretched.

Student _____

Date _____

Instructor's Final Checklist

Check the student's performance in the following elements of performing special operations on the double needle felling machine (curved seams).

Place an X in the appropriate box indicating not accomplished, partially accomplished, or fully accomplished. If, because of special circumstances, the item was impossible to complete, place an X in the "Not Applicable" box.

Performance Level: All items must receive a rating of FULLY ACCOMPLISHED (or Not Applicable). If any items are rated Not Accomplished or Partially Accomplished, the student and instructor will discuss this and decide which learning activities must be repeated.

	Student Performance			
	Not Applicable	Not Accomplished	Partially Accomplished	Fully Accomplished
The student constructed:				
a. a flat felled seam.	( )	( )	( )	( )
b. a seam which was curved according to directions.	( )	( )	( )	( )
c. a seam which was free of puckers.	( )	( )	( )	( )
d. a seam without stretching the fabric.	( )	( )	( )	( )